

00993307.1.12601

Molecule: pPJV2002, 5500 bps DNA Circular  
File Name: pPJV2002.cm5,

Description: Ligation of CTA PCR frag Nhe Bam cut into 7054 Nhe Bam Vector

Notes:

#### Molecule Features:

Type	Start	End	Name	Description
REGION	2242	3060	CMVpro	
REGION	3061	3884	intronA	
GENE	3906	3969	TPAsigCDS'	
GENE	3975	4697	CTA CDS	
REGION	4805	5101	bGHpA	

#### Enzymes (15 sites)

SalI	2241,	MscI	2266,	SpeI	2356,	SacII	3009
NsiI	3106,	PstI	3879,	HindIII	3894,	NheI	3969
ClaI	4553,	BamHI	4698,	BglII	4805,	EcoRI	5100

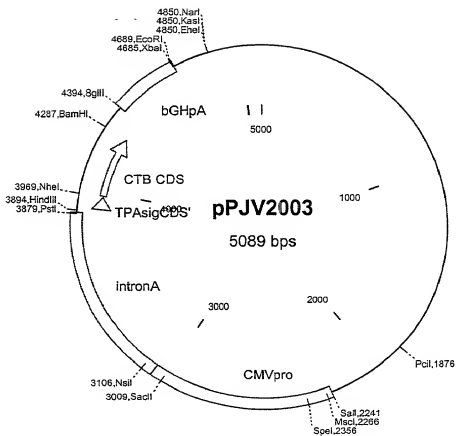
FIGURE 1-1

## Sequence Data

Molecule: pPUV2002, 5500 bps DNA Circular  
 Description: Ligation of CTA PCR frag Nhe Bam cut into 7054 Nhe Bam  
 Vector  
 File Name: pPUV2002.cm5,  
 Printed: 1-5500 bps (Full), format Single Strand

1 GACGAAGAGG CCTCGIGATA GGCCTATTTT TATAGGTTAA TGTCATGATA ATAATGGTTT  
 61 CTTAGACGCT AGGTGGCACT TTTCGGGGAA ATGTGCGCGG AACCCCTATT TGTTTATTTT  
 121 TCTAAATACA TTCAAAATATG TATCCGCTCA TGAGACAATA ACCCTGATAA ATGCTTCAAT  
 181 AATATTGAAA AAGGAAGAGT ATGAGTATTC AACATTTCG TGTCGCCCTT ATTCCTCTTT  
 241 TTGGCGCATT TTGCTTCTCT GTTTTGTGCT ACCCAGAAAC GTCTGGTGAA GTTAAAGATG  
 301 CTGAGATACA TTGTGGGTGCA CGAGTGGGTT ACATCGAACT GGATCTCAAC AAGGGTATAGA  
 361 TCCCTGAGAG TTTTCCGCCC GAAGAACGTT TTCCATGAT GAGCACTTAT AAGGTCTGCG  
 421 TCTGTGGCCG GGTATTATCC CGTATTGACG CCGGGCAGAA GCAACTCGGT CGCCGCATAC  
 481 ACTATTCTCA GAATGACTGT GTTAGACTAC CACCACTCAC AGAAAGCATG CTAACAGTAT  
 541 GCATGACACT AAGAGAATTA TGCAGTGCTG CCATAACCAT GAGTGTATAC ACTGCAGGCA  
 601 ACTTACTTCT GACAACGATC GGAGGACCGA AGGAGCTAAC CGCTTTTTTG CACACATCG  
 661 GGGATCATCT AACTCGCCTT GATCGTTGGG AACCCGAGCT GAATGAGGCT ATACCAATCG  
 721 ACGAGCGTGA CACACGATG CTGTGACAAA TGCGACACAC GTTTCGCAAA CTATTAACTG  
 781 GCGACACTAT TACTTCAGCT TCCCGCAAC AATTAATAGA CTGGATGGAG GCGGATAAAG  
 841 TTGCAAGAGC ACTTCTGGCG TCGGCCCTTC CGGCTGGCTG GTTTATTGCT GATAAATCTG  
 901 GAGCCGTGTA CGGTGGTCTC CGCGGTATCA TTGCAGCACT GGGGCGAGAT GGTAAAGCTT  
 961 CCGGTATCTGT AGTTATCTAC ACGACGGGGA GTACAGCAAC TATGGATGAA CGAAATAGAC  
 1021 AGATCGCTCG AGTAGGTGCC TCACTGATTA AGCATTGGTA CTGTGACAG CAGGTTTACT  
 1081 CATATATACT TTAGATTGAT TTAAAACTTC ATTTTAAATT TAAAGGATC TAGGTGAAGA  
 1141 TCTCTTTTGA TAATCTCATG ACCAAAAATCC CTTAACGTGA GTTCTGCTC CATCGAGGCT  
 1201 CAGACCCCTGT AGAAAAGATC AAAGGATCTT CTTGAGATCT TTTTTTCTG CGGCTAATCT  
 1261 GCTCGTTCGA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGGCG CATCAAGAGC  
 1321 TACCAACTCT TTTTCCGAAG GTAACTGSGT TCAGCAGAGC CGAGATACCA AATACTGTCC  
 1381 TTCTAGTACT CGCGTAGTTA GGCCACACT TCAAGAACTC TGTAAGACCG CTACATATCC  
 1441 TCGCTCTGCT AATCCTGTTA CCAGTGGGCTG CTGCGAGTGG CGATAAGTGC TGCTTACCG  
 1501 GGTGGACTCT AAGACGATAG TTACCAGATA AGGCGGACGG CTGCGGCGGT CTGCGGCGGT  
 1561 CGTGACACCA GCCCAGCTTG GAGCGAACGA CCTACACGGA ACTGAGATCC CTACGAGTCT  
 1621 AGCATTGAGA AAGCGCCACG CTTGCGGAGG GGAGAAAGCG GACAGTAGCG CTGCTAGGCG  
 1681 GCAGGCTGCG ACGAGAGAGC CCGCTCCAGG AGCTTCCAGG GGGAAACCTG TGGTATCTTT  
 1741 ATAGTCTCTG CGGCTTTCGC CACCTCTGAC TTGAGGCTG ATTTTGTGGA TGCTCTGTCAG  
 1801 GGGGGCGGAG CACTTGGAAA AACCGCAGCA ACGCGGCCCT TTATCGGTTT CTGCGCTTTT  
 1861 GCTGGCCCTT TGCTCATATG TTCTTTCTCG CGTTATCCCG TGATTCTGCG GATACCCGTA  
 1921 TTACCGCCTT TGAGTGAGCT GATACCGCTC GCCCGACGG AACGACTGAG CGGAGCGAGT  
 1981 CAGTGAGGCA GGAAGCGGAA GAGCGCCCAA TACGCAAAAC GCCTCTCCCG GCGGTTGGC  
 2041 CGATTCAATTA ATGCACTGCG CACGACAGGT TTCCGACCTG GAACGCGGGC GTTAGCGGCA  
 2101 ACCGAATTA TGTGAGTTAG CTCACTCAAT AGGCACCCCA GCCTTTACAC TTTATGCTTC  
 2161 CGGCTCGTAT TTGTGTGGA ATTGTGAGCG GATAACAACT TCACACAGGA AACAGTATG  
 2221 ACCATGATTA CGCCAAAGTA GTGCACTATA ATCAATATG GCTATTGGCC ATTGCATAG  
 2281 TTGTATCTAT ATCTAATAT GTACATTAT ATTTGGCTAT GTCCAAATG ACCGCAATG  
 2341 TGCAATTGAT TATTGACTAG TTATTAATAG TAATCAATTA CGGGGTCAAT AGTTCATAG  
 2401 CCATATATCG AGTTCCGCGT TACATTAATT ACGGTAAATG CGCCGCTCG TCGCCGCCA  
 2461 ACAGCCCCCG CCCATTGAG TCAATAATGA CTGTATGTTG CATAGTAAC CCAATAGGGA  
 2521 CTTTCTGCTA CGCTCATAG GTGAGTATT TACGTAACG TGCCCACTTG GCAGTACACT  
 2581 AAGTGTATCA TTGCCCAGT CCGGCCCTCT ATTGACGTA ATGACGTAA ATGCGCCGCC  
 2641 TGCACTTAGT CCGAGTACAT GACCTTACGG GACTTTCCTA CTGCGGAGTA CATCTACGTA  
 2701 TTAGTCTGCT CTAATTACAT GGTGATGCGG TTTTGGCAGT ACACCAATGG GCGTGGATAG  
 2761 CGCTTTGACT CACGGGGATT TCCAAGTCTC CACCCCAATT ACGTCAATGG GAGTTTGTGT  
 2821 TGCGACCAAA ATCAACGGGA CTTTCCAAAA TGTGTAATA ACCCGGCCCG GTTAGCGCAA  
 2881 ATGGGCGCTA GCGGTGTACG GTGGGAGGTC TATATAAGCA GAGCTCGTT AGTGAACCGT  
 2941 CAGATCGGCT GAGAGCGCCA TCCACGCTGT TTTGACCTCC ATAGAAGACA CCGGACCGCA  
 3001 TCCAGCCTCC GCGGCGGGGA ACGGTGCATT GGAACGCGGA TTCCCGCTGC CAAGAGGTGAC  
 3061 TGAAGTAGCC CTTATGACT CTATAGGAC ACCCTCTTGG CTCTTATGCA TGTCTATCTG  
 3121 TTTTGGGTT GGGGCTTATA CACCCCGCT CTCTATGCTA TAGGTGATG TATAGCTTAG  
 3181 CCTATAGGTG TGGGTTATTG ACCATTATTG ACCACTGCC TATTGGTATG GATACTTTCT  
 3241 ATCTATTAAT CATAACTAG CTCTTTGCCA CAACTATCTC TATTGGTATC ATGCCAATAC  
 3301 TTGTCTCTTC AGAGACTGAC ACGGACTCTG TATTTTACA GGATGGGGGT CCAATTATTA  
 3361 TTTCAAAATT CACATATACA ACAACGCGCT CCGCCGCTCG CGCACTTTTT ATTAAACATA  
 3421 GCGTGGGATC TCCACGGTGA TCTCGGGTAC CTGTTCGGGA CATGGGCTCT TTTCCGTTAG  
 3481 GCGCGGAGCT TCCACATCCG AGCCCTGTCT CCACTGCTCC AGCCGCTCAT GTGCTCTCG  
 3541 CAGCTCTCTG CTCTTAACAG TGGAGGCCAG ACTTAGGCA AGCAATAGC CACCAACAC  
 3601 CAGTGTGGCG CACAAGGCCG TGGCGGTAGG GTATGTGTCT GAATAATGAC TCGGAGATTG

FIGURE 1-3



Molecule: pPJV2003, 5089 bps DNA Circular  
 File Name: pPJV2003.cm5,  
 Description: Ligation of CTB nhe bam cut frag into 7054 Nhe Bam Vector  
 Notes:

#### Molecule Features:

Type	Start	End	Name	Description
REGION	2242	3060	CMVpro	
REGION	3061	3884	intronA	
GENE	3906	3969	TPAsigCDS'	
GENE	3975	4286	CTB CDS	
REGION	4394	4690	bGHpA	

#### Enzymes (16 sites)

PciI	1876,	SalI	2241,	MscI	2266,	SpeI	2356
SacII	3009,	NsiI	3106,	PstI	3879,	HindIII	3894
NheI	3969,	BamHI	4287,	BglII	4394,	XbaI	4685

FIGURE 2-1

## Sequence Data

Molecule: pPVJ2003, 5089 bps DNA Circular  
 Description: Ligation of CTB nhe bam cut frag into 7054 Nhe Bam Vector  
 File Name: pPVJ2003.cm5  
 Printed: 1-5089 bps (Full), format Single Strand

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121 TCTAAATPACA TTCAAATATG TATCCGCTCA TGAGACAATA ACCCTGATATA ATGCTCTCAAT
181 AATATTGAAA AAGGAAGAGT ATGAGTATTC AACATTTCGG TGTGCGCCTT ATTCCTCTTT
241 TTGCGGCATT TTGCCTTCCT GTTTTTGCTC ACCCAGAAAC CTGTGTAAGT GTAAAGATAGT
301 CTGAAAGATCA GTTGGGTGCA CGAGTGGGTT ACATCGAAGT GGATCTCAAC AGCGGTAAAGA
361 TCCCTTGAGAG TTTTCGCCCC GAAGAACGTT TCTCAATGAT GAGCACTTCT AAAGTCTCTG
421 TATGTGGCGCG GGTATTATCC CGTATTGACG TCCGGCAAGA CGCACTCGGT GCCCGCATAC
481 ACTATTCTCA GAATGACTTG GTTGAAGTAT CACCAGCTAC AGAAGAAGCAT CTACCGGATG
541 GCATGACAGT AAGAGAATTA TGCAGTGCTG CATACACCAT GATGAGTAAC ACTCCGGGCA
601 AGTACTTCTT GACAAACGAT GGAGGACCGA AGGAGCTAAC CGCTTTTTTT CACACACATGG
661 GGGATCATGT AACTCGCCTT GATCGTTGGG AACCGGAGCT GAATGAGGCC ATACCAACGG
721 AGCAGCGTGA CACCAGCATG CCTGTAGCAA TGCGCAACAC GTTTCGCAAA ATACTAAGT
781 GCGAACTACT TACTCTAGCT TCCCGGCAC AATTATAGA CTGGATGAGG CCGGATAAAG
841 TTGCAAGGAC ACTCTTGCGC TCGGCGCTTC CGCTGCGCTG GTTTATTGCT GATAAATCTG
901 GAGCGGTGTA CGTGGGTCTT CGCGGTATCA TTGCAGCACT GGGGCCAGAT GGTAAACGCT
961 CCGCTATCGT AGTTATCTAC AGCAGCGGGA GTCAGGCAAC TATGATAGTA CGAATATAGAC
1021 AGATCGCGTA GATAGTGGCC TCACTGATTA AGCATTGGTA TCTGTCAGAC CAAGTPTACT
1081 CATATATATT TTAGATTGAT TAAACAACTT ATTTTAAATT AATGAGTACA TAGGTGAAGA
1141 TCCCTTTTGA TAATCTCATG ACCAAATACC CTTAAGCTGA GTTTTCTGTC CACTGAGCGT
1201 CAGACCGCTG AGAAGAAGAT AAGAGTACT TTGAGATCTC GTTTTCTGTC GCGTGAATCT
1261 GCTGCTGTCA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTGGCG GATCAAGAGC
1321 TACCACCTGT TTTTCCGAAG GTAAGTGGCT TCAAGCAGAG CGAGATACCA AATAACTGTC
1381 TTTGATGTGA GCGGTAGTTA GGGCCCACT TCAAGAACTC TGTAAGCACG CTCACATATACC
1441 TCGCTCTGCT AATCTGTGTA CGAGTGGCTG CTGCCAGTGG CTGCTTACCG TGCTTTACCG
1501 GGTGTGAGCT AAGACGATAG TTACCGGATA AGGCGCAGCG CTGCGGCTGA AGCGGGGGTT
1561 GTTGACACAC GCCCAGCTTG GAGCGAAACGA CCTACACCGA CTCAGAGTAC CTACAGCTG
1621 AGCATTGAGA AAGCGCCACG CTTCCGGAAG GAGAGAAAGG GGCAGGATAT CCGGTAAAGG
1681 CGAGGTTGCG AACAGGAGAG CGCAGAGGAG AGCTTCCAGG GGGAAAGCGG TGGTATATG
1741 ATAGTCTGCT CGGTTTTCGC CACTCTCAG TTGAGCTGCG ATTTTGTGA TGCTCTGTCAG
1801 GGGGCGCGAG CTTATGAAA AACGCCACGA ACGGCGGCTT TTACGGTTC CTGCGCTTTT
1861 CTGCGCTCTT TGCTACATG TTCTTTCTG CGTATCTCCC TGATTCGTG GATAACAGCT
1921 TCTGCGCCTT TGAGTGAGCT GATACCGCTC CGCGCAGCGC AAGCAGCGAG CCGCAGGAGT
1981 CAGTGAAGCA GGAAGCGGAA GAGCGCCCAA TACGCAAAAC GCCTCTCCCC GCGGCTTGGC
2041 CGATTCTATT ATGCAGCTGG CACGACAGGT TTCCCGACT GAAAGCGGCG AGTGAAGCGCA
2101 AGCGAATTAA TTGTGATTAG CTCACCTATT AGGCACCCCA GCGCTTACAC TTATGTGCTC
2161 CGGCTCGTAT GTTGTGTGGA ATTGTGAGCG GATAACAATT TCACAACAGA AACAGCTATG
2221 ACCATGATGA GCCCAAGCTA GTCGACATAA ATCAATATTG GCTATTGGCC ATTCGATAAG
2281 TTGTATCTAT ATCATATAT GTACATTTAT ATTGCTCAT TTCCGAATG ACCGCGATAG
2341 TGCAATTATG TATTGACTAG TTATTAAATG TAATCAATGA CGGGGTCATT AGTTCATAGT
2401 CCAATATATG AGTTCGCGCT TACATAACTT ACGGTAAATG GCCCGCTCG TGACCGGCCA
2461 ACAGACCCCC CGCACTGAGC TCAATTAATG CGTATGAGT CATAGTACA CCAATAGGGA
2521 CTTTCCCATG ACGTCAATGG GTGGAGTAT TACGTATAAC ATTGACCTGA ATGACGGTAA ATGCGCCGCG
2581 AAGTGGTATCA TATGCCAAGT TATGCCAAGT GACCTTACGG GACTTCTCTA TTGGCAGTA ATGCTACGTA
2641 TGCACTTATG CACTTCAAGT CATATACCAT GGTGATGCGG TTTTGGCAGT ACACCAATGG CGGTGGATAG
2701 TTAGCTCATC CTATACCAT GGTGATGCGG TTTTGGCAGT ACACCAATGG CGGTGGATAG
2761 CGGTTTGACT CACGGGGATT TCCAAGTCTC CACCCCTATG AGCTCAATGG GGTGTTGTTT
2821 TGGCACAATA ATCAACGGGA CTTTCCAATA TGTCGTAATA ACCCGCGCCC GTTGACGCAA
2881 ATGGGCGGTA GCGCTGTACG GTGGGAGGTC TATATAAGCA GAGCTCGTAT AGTGAACGAT
2941 CAGATCGCTC GGAGACGCCA TCCACGCTGT TTTGACCTCC ATAGAAGACA CCGGAGACCA
3001 TCCAGCTCCC GCGCGCCGGA ACGGTGCATT GGAACGCGGA TTCCCGTGC CATAGAGTAC
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3121 TTTTGGCTTG GGGGCTTATA CACCCCGCTC CTTATGCTA TAGGCTGATG TAGCTATTAG
3181 CTTATAGGTT TGGGTTATTG ACCATTATTG ACCACTCCCC TATTGGTGAC GATACCTTTCC
3241 ACTATTAATC CATAACATGG CTCTTTGGCA CAACTATCTC TATTGGCTAT ATGCGAATAG
3301 TCTGTCTCTC AGAGACTGAC ACGGACTCTG TATTTTACGA GGATGGGGTG CCAATTATTA
3361 TTTACRAAAT CACATATACA ACAACGCCGT CCCCCTGCCC CCGAGTITTT ATTTAAACATA
3421 CGGTGGGATC TCCACGCGAA TCTCGGCTAG GTGTTCCGGA CATTGGGCTCT TCTCCGGTAG
3481 CGCGGAGACT TCCACATCCG AGCCCTGGTC CCATGCTCTC CGTGGCTCTG GGTCCGCTCG
3541 CAGCTCTCTG CTCTTAACAG TGGAGGCCAG ACTTAGGCAC AGCAACATGG CACACACCAT
3601 CAGTGTGCGC CACAAGGCCG TGGCGGTAGG GTATGTGTCT GAAGAATGAC TCCGAGATGG

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FIGURE 2-2

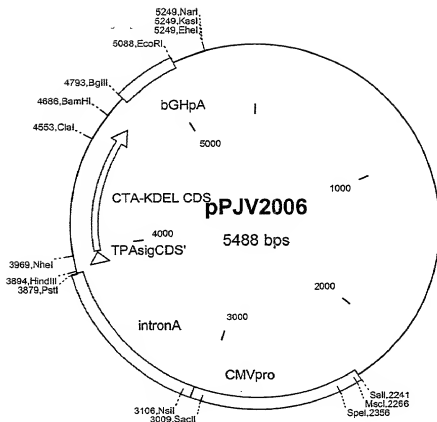
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3721 TGAGTTGTTG TATTCTGATA AGAGTCAGAG GTAACCTCCG TTGCGGTGCT GTTAACGGTG
3781 GAGGGCAGTG TAGTCTGAGC AGTACTCGTT GCTGCCGCGC GCGCCACCAG ACATAATAGC
3841 TGACAGACTA ACAGACTGTT CCTTTCCATG GGTCTTTTCT GCAGTCACCG TCCAAGCTTG
3901 CAATCATGGA TGCAATGAAG AGAGGGCTCT GCTGTGTGCT GCTGCTGTGT GGAGCAGTCT
3961 TCGTTTCGGC TAGCACACCT CAAAATATTA CTGATTTGTG TGCAGAATAC CACAACACAC
4021 AAATATATAC GCTAAATGAT AAGATATTTT CGTATACAGA ATCTCTAGCT GGAAGAAAGAG
4081 AGATGGCTAT CATTACTTTT AAGAATGGTG CAATTTTTTC AGTAGAAGTA CCAGGTAGTC
4141 AACATATAGA TTCACAAAAA AAAGCGATTG AAAGGATGAA GGATACCCCTG AGGATTGCTAT
4201 ATCTTACTGA AGCTAAAGTC GAAAAGTTAT GTGTATGGAA TAATAAAAGC CCTCATGCGA
4261 TTGCCGCAAT TAGTATGCGA AATTAAGGAT CCTCGCAATC CCTAGGAGTA TTAGGCAAGG
4321 GCTTGAGCTC ACGCTCTTGT GAGGGACAGA AATCAATCA GCGGCAGTAT ATGAATACTC
4381 CATGGAGAAA CCCAGATCTA CSTATGATCA GCTTCGACTG TGCTTTCTAG TTGCCAGCCA
4441 TCTGTGTTT GCGCCTCCCC CGTGCTTCC TTGACCCCTG AAGGTGCCAC TCCCACTGTC
4501 CTCTTCTTAT AAAATGAGGA AATTGCATCG CATTGTCTGA GTAGTGCTCA TTCTATTCTG
4561 GGGGGTGGGG TGGGGCAGGA CAGCAAGGGG GAGGATTGGG AAGACAATAG CAGGCATGCT
4621 GCGGATGCGG TGGGCTCTAT GGCTCTTGAG GCGGAAGGAA CCAGCTGGGG CTGCACAGCT
4681 CGACTCTAGA ATTCATGGC CGTCTGTTTA CAACGTCGTG ACTGGGAAAA CCGTGGCGTT
4741 ACCCACTTA ATCGCCTTGC AGCACATCCC CCTTTCGCCA GCTGGCGTAA TAGCGAAGAG
4801 GCCCGCACCG ATCGCCCTTC CCAACAGTTG CGCAGCCTGA ATGGCGAATG GCGCCTGATG
4861 CGGTATTTTC TCCTTACGCA TCTGTGCGGT ATTTACACCC GCATATGGTG CACTCTCAGT
4921 ACAATCTGCT CTGATGCGGC ATAGTTAAGC CAGCCCCGAC ACCCGCCAAC ACCCGCTGAC
4981 GCGCCCTGAC GGGCTTGCTCT GCTCCCGGCA TCCGCTTACA GACAAGCTGT GACCGTCTCC
5041 GGGAGCTGCA TGTGTCAGAG GTTTTCACCG TCATCACCBA AACGCGCGA

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FIGURE 2-3

0993307.11601



Molecule: pPJV2006, 5488 bps DNA Circular  
File Name: pPJV2006.cm5,

Description: Ligation of CTA-KDEL PCR Frag cut w/ Nhe Bam into 7054 Nhe Bam Vector

Notes:

#### Molecule Features:

Type	Start	End	Name	Description
REGION	2242	3060	CMVpro	
REGION	3061	3884	intronA	
GENE	3906	3969	TPAsigCDS'	
GENE	3975	4685	CTA-KDEL CDS	
REGION	4793	5089	bGHpA	

#### Enzymes (15 sites)

Sall	2241,	MscI	2266,	SpeI	2356,	SacII	3009
NsiI	3106,	PstI	3879,	HindIII	3894,	NheI	3969
ClaI	4553,	BamHI	4686,	BglII	4793,	EcoRI	5088

FIGURE 3-1

## Sequence Data

Molecule: pPJUV2006, 5488 bps DNA Circular  
 Description: Ligation of CTA-KDEL PCR Frag cut w/ Nhe Bam into 7054 Nhe Bam Vector  
 File Name: pPJUV2006.cms,  
 Printed: 1-5488 bps (Full), format Single Strand

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121  TCTAAATACGA TTCAAAATATG TATCCGCTCA TAGACAATAA ACCCTGATAT ATGCTTCATAT
181  AATATATGAAA AAGGAGAGATG ATACGCTTCC AGCAATTTCG TGTGCGCTCT ATTCCCTTTT
241  TTGCGCGATT TTGCTCTGCT GTTATTGCTC ACCCAGAAAC GTGTGGTGAA GTAAAGATATG
301  CTSBAGATCA GTTCGGTGCA CGAGTGGGTT ACATCGAATC GAGATCAAC ACCGGTAAAGA
361  TCCTTGAGAGT TTTCGCCCCC GAAGAAGCGT TTCCAATGAT GAGCACTTTT AAAGTTCTGC
421  TATGTGGCGC GGTATTATTC CGTATTGAAG CCGGGCAAGA GCACCTCGGT CGCCGATAC
481  ACTATTCTCA GAATGACTTG GTTGAGTACT CACCAGTCA CAGAAAGCAT CTTCAGGATG
541  GCATACACAT ABAGAATAA TGCAGTGCTG CCATAACAT GAGTGAATAC ACTCGGGCCA
601  ACTTATCTCT GACAACGATC GGAGGACCGA AGGAGCTAAC CGCTTTTTTG CACAACATGG
661  GGGATCATGT AACTCGCCTT GATCGTTGGG AACCGAGCT GAATGAAGCC ATACCAAGCC
721  ACAGCGGTGA CACCACGATG CCTGTAGCAA TGGCAACAAC GTTGCGCAAA CTATTAACTG
781  GCGAAGTACT TACTCTAGT TCCCGGCAAC AATTAATAGA GTTGGATGAG CGGGATAAAG
841  TTGCAGGACG ACTTCTGGCG CTGGGCCCTC CGCTGGCTG GTTTATTGCT GATAAATCTG
901  GAGCGCGTGA CGGTGGGTCT CGCGGTATCA TTGCAGCAT GGGGCCAGAT GGTAAAGCCGT
961  CCGGTATCTG AGTTATCTAC ACAGCGGGGA GTACAGCAAC TATGGATGAA CGAAATAGAC
1021 AGATCGCTGA GATAGTGCCC TCACGTGATA AGCAITGGTA ACTGTACAGC CAAGTTTACT
1081 CATATATACT TTAGATTGAT TTAAGAACTC ATTTTAAIT TAAAGAGCAT TAGTGAAGA
1141 TGCTTTTTTG TAACTCTATG ACCAAAATCC TTAAACGTGA TTTCCTGCTC CACTGAGCGT
1201 CGAGCCCGCT AGAAAAGATC AAAGGATCTT CTGAGATGCC TTTTTCCTG CGCGTAATCT
1261 GCTGCTTGCA AACAAAAAAA CCACCGCTAC CACGCGTGST TTGTTTCCG GATGTACAGC
1321 TACCAACTCT TTTCGCGAAG GTAACTGATA GCGCAACAGC GCAGATACCA ANACTGTCC
1381 TTCTGCTGAT AATCTGTGTA CCAGTGGCTG CTGCGAGTGC CGATAAGCCG TGCTCTACCG
1441 TGCTCTGCTC AAGACGATAG TTACCGGATA AGGCGCAGCG CTGCGGCTGA ACGGGGGGTT
1501 GGTGGACACA GCGCCAGCTT GAGCGAAGCA CCTACACCA GCTGACGCTG CTACAGCTGT
1561 AGCAITGAGA AAGCGCCAGC CTTCCTGAGG GAGAGAAAGC GGACAGGTAT CCGGTAAAGC
1621 GCAGGTTGGA CACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC TGGTATCTTT
1741 ATAGTCCCTG CGGGTTTCGC CACCTCTGAC TTGAGGCTCG ATTTTGTGTA TGCTCGTCAG
1801 GGGGGCGGAG CCTATGGAAA AACCGCCAGCA ACGGGCGCTT TTTACGCTTC CTGCGCTTTT
1861 GCTGCGCCTT TGCTCATGCT TTCTTTCCTG CGTTATCCCC TGACTCTGAT GATAACCGTA
1921 TTACGCCCTT TGAGTGAGCT GATACCGCTC GCGCGACGCG AACGACCGAG CGCAGCGAGT
1981 CAGTAGAGCA GGAAGCGGAA GAGCGCCCAA TACGCAAAAC GCCTCTCCGC GCGGTTTGGC
2041 CGATTCTATA ATGCAAGCTG CAGCAGCGGT TTCCGCACTG CAGTGAAGCA AGTGAAGCA
2101 ACGCATATTA TGAGTGATAG CTCACTCAT TTGCGACCCA GCTTTACACG TTTATGCTTC
2161 CCGCTCGTAT GTTGTGSGA ATTGTGAGCG GATAACAATT TCACACAGGA AACAGCTATG
2221 ACACATATTA GCGCAAGCTA GTCCACATAA ATCAATATTG GTCTATTGCC ATTGCTATAG
2281 TGACTTCTAT ATCATAATAT GTACATTAT ATTGGCTCAT GTCCAAATAT ACCGCCATGT
2341 TGACATGAT TATTGACTAG TTATTAATAG TAATCAATTA CGGGGTCAAT AGTTCATAGC
2401 CCATATATGG AGTTCCGCGT TACATAAATT ACGGTAAATG GCCCGCTGCG TGACCGCCCA
2461 ACAGACCCCG CCCATTGAGC TCAATAATGA CGTATGTTCC CATATGAGGA CCAATAGGGA
2521 CTTTCCATGG AGCTCAATGG GTGGAGTATT TACGGTAAAC TGCCCACTTG CGAGTACATC
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2701 TTAGTCACTG CTATATACAT GGTGATGCGG TTTTGGCAGT ACACAAATGG CGGTGATAG
2761 CGGTTTGACT CACGCGGATT TCCAAGTCTC CACCCCAATT ACGTCAATGG GAGTTTGTAT
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2881 ATGGGCGGTA GCGGTGTACG GTGGGAGGTC TATATAAGCA GAGCTGGTTT AGTGAACCGT
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3301 TGCTCTCTTC AGAGATGAC ACGGACTCTG TATTTTACA GGATGGGGTG CCAATTATTA
3361 TTACAAATTT CACATATACA ACACGCGCGT ACCCGTGGC CGCATTTTTT ATTAACATA
3421 CGGTGGGATC TCCACGCGAA TCTCGGTCAC GTGTTCCGGA CATGGGCTCT TCTCCGGTAG
3481 CGCGCGAGCT TCCACATCCG AGCCCTGGTC CCATGCTCTG AGCGGCTCAT GTGTCGATG
3541 CAGCTCCTTG CTCTTAACAG TGGAGGCCAG ACTTAGGCAC AGCAACAATG CCACCAACAC
3601 CAGTGTGCGC CACAAGGCC TGGCGGTAGG GTATGTGTCT GAAATATGAG TCGGAGATTG

```

FIGURE 3-2



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3661 GGCTCCGACC GTGACCCAGA TGGAGACTT AAGGCAGCGG CAGAACTGA TGCAGGCAGC
3721 TGAGTTCTTG TATTCTGATA AGAGTCAGAG GTAACTCCCG TTGCGGTGCT GTTAACGCTG
3781 GAGGGCAGTG TAGTCTGAGC AGTACTCGTT GCTGCCGCGC GCGCCACCAG ACATAATAGC
3841 TGACAGACTA ACAGACTGTT CCTTTCCATT GGTCTTTTCT GCAGTCACCG TCCAAGCTTG
3901 CAATCATGGA TGCATGAAG AGAGGGCTCT GCTGTGTGCT GTGTCTGTGT GGAGCAGTCT
3961 TCGTTTCGGC TAGCAATGAT GATAAGTAT ATCGGGCAGA TTCTAGACCT CCTGATGAAA
4021 TAAAGCAGTC AGGTGGTCTT ATGCCAAGAG GACAGAGTGA GTACTTTGAC CGAGGTACTC
4081 AAATGAATAT CAACCTTTAT GATCATGCAA GAGGAAGTCA GACGGGATTT GTTAGGCACG
4141 ATGATGGATA TGTTTCCACC TCAATTAGTT TGAGAAGTGC CCACTTAGTG GGTCAAACCTA
4201 TATTGTCTGG TCATTTCTACT TATTATATAT ATGTTATAGC CACTGCACCC AACATGTTTA
4261 ACGTTAATGA TGTATTAGGG GCATACAGTC CTCATCCAGA TGAACAAGAA GTTTCTGCTT
4321 TAGGTGGGAT TCCATATCC CAAATATATG GATGGTATCG AGTTCATTTT GGGGTGCTTG
4381 ATGAACAATT ACATCGTAAT AGGGGCTACA GAGATAGATA TTACAGTAAC TTAGATATTG
4441 CTCCAGCAGC AGATGGTTAT GGATTGGCAG GTTTCCTCTC GGAGCATAGA GCTTGGAGGG
4501 AAGAGCCGTG GATTTCATCAT GCACCGCCGG GTTGTGGGAA TGCTCCAAGA TCATCGATGA
4561 GTAATACTTG CGATGAAAAA ACCCAAAGTC TAGGTGTAAA ATTCTTTGAC GAATACCAAT
4621 CTAAGTAAAT AAGACAAATA TTTTCAGGCT ATCAATCTGA TATTGATACA CATAATAGAA
4681 TTTGAGGATC CTCGCAATCC CTAGGAGGAT TAGGCAAGGG CTTGAGCTCA CGCTCTTGTG
4741 AGGGACAGAA ATACAATCAG GGGCAGTATA TGAATACTCC ATGAGAGAAC CCAGATCTAC
4801 GTATGATCAG CCTCGACTGT GCCTTCTAGT TCCAGCCCAT CTTGTGTTTG CCGCTCCCCC
4861 GTGCCCTTCT TGACCCCTGGA AGGTGCCACT CCCACTCTCC TTTCTAATA AAATGAGGAA
4921 ATTGCATCGC ATTGCTGAGG TAGGTTCAT TCTATTCTGG GGGGTGGGGT GGGGCAGGAC
4981 AGCAAGGGG AGGATTGGGA AGACAATAGC AGGCATGCTG GGGATGCGGT GGGCTCTATG
5041 GCTTCTGAGC CGAAGAAGAC CAGCTGGGGC TCGACAGCTC GACTCTAGAA TTCACGTGGC
5101 GTCGTTTACC AACGTGCTGA CTGGGAAAGC CCGTGGCGTTA CCCAACTTAA TCGCCTTGCA
5161 GCACATCCCC CTTTGCCAG CTGGCGTAAT AGCGAAGAGG CCGCAGCCGA TCGCCTTCC
5221 CAACAGTTGC GCAGCCTGAA TGGCGAATGG CGCCTGATGC GGTATTTTCT CTTTACGCAT
5281 CTGTGCGGTA TTTTCACACG CATATGGTGC ACTCTCAGTA CAATCTGCTC TGATGCCGCA
5341 TAGTTAAGCC AGCCCCGACA CCGCCAACA CCGCTGAGC CGCCCTGACG GGCTTGTCTG
5401 CTCCCGCAT CGCCTTACAG ACAAGCTGTG ACCGTCTCCG GGAGCTGCAT GTGTCAAGAG
5461 TTTTCACCGT CATACCGGAA ACAGCGCA

```

FIGURE 3-3

0093307.112601



Molecule: pPJV2004, 5500 bps DNA Circular  
File Name: pPJV2004.cm5,

Description: Ligation of LTA Nhe-Bam Insert into 7054 Nhe Bam Vector

Notes:

## Molecule Features:

Type	Start	End	Name	Description
REGION	2242	3060	CMVpro	
REGION	3061	3884	intronA	
GENE	3906	3969	TPASigCDS'	
GENE	3975	4697	LTA-CDS	
REGION	4805	5101	bGHpA	

Enzymes (13 sites)

PciI	1876,	SalI	2241,	MscI	2266,	SpeI	2356
SacII	3009,	NsiI	3106,	PstI	3879,	NheI	3969
BamHI	4698,	BglII	4805,	EheI	5261,	KasI	5261

FIGURE 4-1

## Sequence Data

Molecule: pPJUV2004, 5500 bps DNA circular  
 Description: Ligation of LTA Nhe-Bam Insert into 7054 Nhe Bam Vector  
 File Name: pPJUV2004.cms  
 Printed: 1-5500 bps (Full), format Single Strand

0092307.112601

```

1   GACGAAAGGG CCTCGTGATA CGCCTATTTT TATAGGTTAA TGTCATGATA ATAATGGTTT
61  CTTAGACGCTC AGGTGGCACT TTTCGGGGAA ATGTGCGGGG AACCCCTATT TGTTTATTTT
121 TCTAAATACA TTCAAAATATG TATCCGCTCA TGAGACAATA ACCCTGATAA ATGCTTCAAT
181 AATATTGATA AAGGAAGAGT ATGAGTATTC AACATTCCG TGTGCCCCCT ATTCCCTTTT
241 TTGCGGCATT TTGCCTTCTC GTTTTGTGCT ACCCGAAGAC GCTGTGGAAA GTAAAGATAG
301 CTGAAAGATCA GTTGGGTGCA CGAGTGGGTT ACATCGAATC GGATCTCAAC AGCGGTAAAGA
361 TCCTTTAGAG TTTTGGCCCC GAAGAACGTT TTCCAATGAT GAGCACTTTT AAAGTCTCTG
421 TATGTGGCCG GGTATTATTC CGTATTGACG CCGGGCAAGA GCAACTCGGT CGCGCGATAC
481 ACTATTCTCA GAATGACTGT GTTGAGTACT CACCAGCTAC AGAAAAGCAT CTTACGGGATG
541 GCATGACAGT AAGAGAATTA TGCAGTGCTG CCNATACGCT GAGTGAATAAC ACTTCGGGATG
601 ACTTACTCTT GACAAACGATC GGAGGACCGA AGGAGCATTA CCCTTTTTTG CACAACATGG
661 GGGATCACTG AACTCGCCTT GATCGTTGGG AACCGGAGCT GAATGAAGCC ATACCAAAAGC
721 ACGAGCGTGA CACCACAGCT CCTGTAGCAA TGGCAACAAC GTTGGCGCAA CTTATTAAGT
781 CGGAACCTACT TACTCTAGCT TCCTGGCAAC AATTAAATAGA GTTGGGAGG CGGGATAAAG
841 TTGACGAGCC ACTTCTGGCC TCCTGGCCCTC CGCTGGGCTG GTTTATTGCT GATPAATCTG
901 GACCCGCTGA GCGTGGGTCT CGCGGTATCA TTGCGACATC GGGCGCAGAT GGTAAACGCT
961 CCGCTATCTG AGTTATCTAC ACACAGCGGA GTCCGCAAC TATGAGTAA CCAAAATAGAC
1021 AGATCGCTGA GATAGTGGCC TCACGTATTA AGCATTGGTA ACTGTGACAC CAGGTITACT
1081 CATATATATG TTAGATTGAT TTAAAACCTC ATTTTAAATG TAAAGGATC TAGGTGAAGA
1141 TCCTTTTGTG TAATCTCATG ACCAAATATC CTTAAAGTGA GTTTTCGTTG CACTGAGCTG
1201 CGGACCCCTG AGAAAAGATC AAAGGATCTT CTTGAGATCC TTTGTTCTG CGGTGATCTC
1261 GCTGCTGTGA AACAAAATAA CCACCGCTAC CAGCGGTGGT GTTTTGGCG GATCAAGAGC
1321 TACCACCTGT TTTCCGAAG GTAACCTGCT TCAGCAGAGC CGAGTATGCA AATACTATTC
1381 TTCTAGTATA GCGGTAGTTA GGCCACCACT TCAAGAACTC TGTAGCACCG CTTACATACC
1441 TCGCTCTGCT AATCCTGTTA CCACTGGGCT GTGCGAGTGT CGATAGACCG TTTCTTACCG
1501 GGTGTGACTC AAGACGATAG TTACCGGATA AGGCGCAGCG CTGCGGCTGA ACGGGGGGTT
1561 CGTGACACAC GCGCAGCTTG GACGGAACGA CTACACACGA ACTGAGAGCA CTACAGCGTG
1621 ACGATTGAGA AAGCGCACCG TTCCCGAAGG GGAGAAAGGC GGACAGGATG CCGGTAAAGCG
1681 CGAGGCTCGG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GCGAATACGCT TGGTATCTTT
1741 ATAGTCTCTG CGGTTTGGC CACCTCTGAC TTGAGGCTGC ATTTTGTGTA TGCTCTCTAG
1801 GGGGCGGAGC CTTATGAAA AACGCGCACT TTTAGGGTTC CTGCGCTTTT
1861 GCTGSCCTCT TCTTCATAG TTCTTCTCTG CTTTATCCCG TGATCTGTG GATAACCGTA
1921 TTACCGCTCT TGAGTGAGCT GATACCGCTC CGCCGAGCGG AACACGAGCG CGCAGCGAGT
1981 CAGTGAGCGA GAAAGCGGAA GAGCGGCCAA TACGCAAAAC CCGCTTCCCC GCGGTTTGGC
2041 CGATTCAATTA ATGCAGCTGG CACGACAGGT TTCCCGACTG GAAAGCGGGC AGTGAGCGCA
2101 ACGCAATTAAT TGTGAGTTAG CTCACCTATT AGGCACCCCA GGCTTTACAC TTTAGGCTTC
2161 CGGCTCGTAT GTTGTGTGGA ATTGTGAGCG GATAACAATT TCACATAGCA AACAGCTATG
2221 ACCATGATTA GCGCAAGCTA GTGCACATAA ATCAATATTT GTCTATGGCC ATTTGCATAGC
2281 TTGTATCTAT ATCATAATAT GTACATTTAT ATTGGCTCAT GTCCAATATG ACCGCGATGT
2341 TGACATTGAT TATTGACTAG TTATTAATAG TAATCAATTA CCGGGTTCATT AGTTTCATAGC
2401 CCATATATAG AGTTCCGCGT TACATAAATT ACGGTAAATG CCGCGGCTCG TGACCGCCCA
2461 ACGACCCCCG CCCATTGACG TCAATAATGA CGTATGTTCC CGTATGTAAC CCAATAGGGA
2521 TTTTCCATTG ACGTCAATGG GTGGAGTATT TACGCTAATC TGCCCACTTG GCATGATC
2581 AAGTGTATCA TATGCCAAGT CCGGCGGCTT ATTGACGTAC ATGACGTA ATGCGCGGCG
2641 TGCACTTATG TCGATTGATG GACTTCACTA GTCTGACGTA GACTTCACTA GACTTCACTA
2701 TTGATCTGCT CTATTACAT GGTGATGCGG TTTTGGCAAT ACACCAATGG GCGTGTATAG
2761 CGGTTTGACT CACGGGATC TCCAAGTCTC CACCCCATGT ACGTCAATGG GAGTGTGTTT
2821 TGCGACCAA ATCAACGGGA CTTTCCAAAA TGTGTATTA ACCCGCCCC GTTGAACGAA
2881 ATGGGCGTGA GCGGTGTACG GTGGGAGGTC TATATAAGCA AGCGCTGGT AGTGAACCGT
2941 CAGATCGCCT GGAGACGGCA TCCACGCTGT TTTGACCTCC ATAGAAGCA CCGGAGCCGA
3001 TCCAGCCTCC CGGCGCGGGA ACGGTGCATT GGAACGCGGA TCCCGGTGC CAAGAGTGAC
3061 GTAAGTACCG CCTATAGACT CTATAGGCAC ACCCCTTTGG CTCTATGCA TGCTTACTG
3121 TTTTGGGCTG GGGGCTATA CACCCCGCTC CTTATGCTA CTATGATGG TATAGCTTAG
3181 CCTATAGTGT TGGGTTATTG ACCATTATAT ACCACTCCCC TATGTGTGAC GATACTTTCC
3241 ATTACTAATC CATACATAGG CTCTTTGGCA CAACTACTCC TATTTGGCT ATGTCCAATC
3301 TCTGTCTCTC AGAGACTGAC ACGGACTCTG TATTTTACA GGTATGGGTC CAATTATTA
3361 TTTACAARAAT CACATATACA ACAACGCGGT CCCCCTGGC CGAGTMTT ATTTAAACATA
3421 CGGTGGGATC TCCACGCGAA TCTCGGGTAC GTGTTCGCGA CATGGGCTCT TCTCCGGTAG
3481 CGCGCGAGCT TCCACATCCG AGCCCTGGTC CCATCGCTCC AGCGGCTCAT GGTGCTCGG
3541 CAGTCTCTTG CTCTTAACAG TGAAGGCCAG ACTTAGGCAC AGCAATATG CCGACCACAC
3601 CAGTGTGGCG CACAAGGCGG TGGCGGTAGG GTATGTGTCT

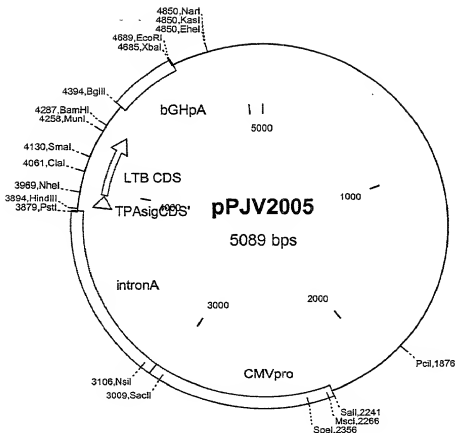
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FIGURE 4-2

3661 GGCTCGCACC GTGACGCAGA TGAAGACTT AAGGCAGCGG CAGAAGAAGA TGCAGGCAGC  
 3721 TGAGTTGTGT TATTCTGATA AGAGTCAGAG GTAACCTCCG TTGCGGTGCT GTTAAACGGTG  
 3781 GAGGGCAGTG TAGTCTGAGC AGTACTCGTT GCTGCCGCGC GCGCCACCAG ACATAATAGC  
 3841 TGACAGACTA ACAGACTGTT CCTTTCCATG GGTCTTTTCT GCGAGTCACG TCCAAGCTTG  
 3901 CAATCATGGA TGCATTAAG AGAGGGCTCT GCTGTGTGCT GCTGCTGTGT GGAGCAGTCT  
 3961 TCGTTTCGGC TAGCAATGGC GACAAATTAT ACCGTGCTGA CTCTAGACCC CCAGATGAAA  
 4021 TAAACGTTTC CGGAGGTCTT ATGCCACAGG GGCATAATGA GTACTTCGAT AGAGGAACCTC  
 4081 AAATGAATAT TAATCTTTAT GATCACGCGA GAGGAACACA AACC GGCTTT GTCCAGATATG  
 4141 ATGACGGATA TGTTTCCACT TCTCTTAGTT TGAGAAGTGC TCACCTTAGCA GGACAGTCTA  
 4201 TATTATCAGG ATATTCCACT TACTATATAT ATGTTATAGC GACAGCACCA AATATGTTTA  
 4261 ATGTTAATGA TGTATTAGGC GTATACAGCC CTCACCCATA TGAACAGGAG GTTTCCTGCGT  
 4321 TAGGTGGAAT ACCATATTCT CAGATATATG GATGGTATCG GTTAAATTTT GGTGTGATTG  
 4381 ATGAACGATT ACATCGTAAC AGGGAATATA GAGACCCTGA TTACAGAAAT CTGAATATAG  
 4441 CTCGGCGAGA GGATGGTTAC AGATTAGCAG GTTTCACCAC GGATCACCAG GCTTGGAGAG  
 4501 AAGAACCCTG GATTTCATCAT GCACCACAAG GTTGTGGAAA TTCACTCAAG ACAATTACAG  
 4561 GTGATACTTG TAATGAGGAG ACCCGAATC TGAGCACAA ATATCTCAGG AAATATCAAT  
 4621 CAAAAGTTAA GAGGCAGATA TTTTCGACT ATCAGTCAGA GGTTCGATA TATAACAGAA  
 4681 TTCGGATGA ATTATGAGGA TCCTCGCAAT CCTTAGGAGG ATTAGCCAG GGCTTGAGCT  
 4741 CACGCTCTTG TGAGGGCAGC AATACAAATC AGGGCGAGTA TATGAATCT CCATGGAGAA  
 4801 ACCCAGATCT ACGTATGATC AGCCTCGACT GTGCGTTCTA GTTTCAGACC ATCTGTGTGT  
 4861 TGCCCTCTCC CCGTGCCTTC CTTGACCCTG GAAGGTGCCA CTCGCCACTGT CTCTTCTTAA  
 4921 TAAATGAGG AATTTGCATC GCATTGTCTG AGTAGGTGTC ATTCTATTCT GGGGGGTGGG  
 4981 GTGGGGCAGG ACAGCAAGGG GGAGGATTGG GAAGACAATA GCAGGCTATG TGGGGATGCG  
 5041 GTGGGCTCTA TGGCTTCTGA GGCGGAAAGA ACCAGCTGGG GCTCGACAGC TCGACTCTAG  
 5101 AATTCACTGG CCGTCGTTTT ACAACGTCGT GACTGGGAAA ACCCTGGCGT TACCCAACTT  
 5161 AATCGCCTTG CAGCACATCC CCTTTGCGCC AGCTGGCGTA ATAGCGAAGA GGCCCGCACC  
 5221 GATCGCCCTT CCCAACAGTT GCGCAGCCTG AATGGCGAAT GCGCGCTGAT GCGGTATTTT  
 5281 CTCCTTACGC ATCTGTGCGG TATTTTCACAC CGCATATGCT GCATCTCTAG TACAATCTGC  
 5341 TCTGATCGCG CATAGTTAAG CCAGCCCCGA CACCCGCCAA CACCCGCTGA CGCGCCTGTA  
 5401 CGGCGTGTGC TGCTCCCGGC ATCCGCTTAC AGACAAGCTG TGACCGTCTC CGGGAGCTGC  
 5461 ATGTGTCAGA GGTTTTCACC GTCATCACG AAACGCGCGA

FIGURE 4-3

0993307.1.1654



Molecule: pPJV2005, 5089 bps DNA Circular  
 File Name: pPJV2005.cm5,

Description: Ligation of LTB NheBam Frag into 7054 Nhe Bam Vector

Notes:

#### Molecule Features:

Type	Start	End	Name	Description
REGION	2242	3060	CMVpro	
REGION	3061	3884	intronA	
GENE	3906	3969	TPAsigCDS'	
GENE	3975	4286	LTB CDS	
REGION	4394	4690	bGHpA	

#### Enzymes (19 sites)

PciI	1876,	SaI	2241,	MscI	2266,	SpeI	2356
SacII	3009,	NsiI	3106,	PstI	3879,	HindIII	3894
NheI	3969,	ClaI	4061,	SmaI	4130,	MunI	4258

FIGURE 5-1

## Sequence Data

Molecule: pPJUV2005, 5089 bps DNA Circular  
 Description: Ligation of LTB NheBam Frag into 7054 Nhe Bam Vector  
 File Name: pPJUV2005.cm5,  
 Printed: 1-5089 bps (Full), format Single Strand

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1  GACGAAAGGG CCTCGTGATA CGCCTATTTT TATAGGTTAA TGTGATGATA ATAATGGTTT
61  CTTGAGCGCTG AGGTGGCACT TTTGCGGGGAA ATGTGCGCGT AACCCCTATT TGTTTATTTT
121 TCTAAATACA TTCAAATATG TATCCGCTCA TGAGACAATA ACCTGTGATA ATGCTTCRAAT
181 AATATTGAAA AAGGAAGAGT ATGAGTATTC AACATTTCGG TGTGCCCCTT ATTCCCTTTT
241 TTGCGGCATT TTGCCTTCCT GTTTTTTGCT ACCCGAAACG CTGTGTTGAA GTAAAGATGT
301 CTGAAGATCA GTTGGGTGCA CGAGTGGGTT ACATCGGAAC GATGCTCAAC AGCGGTAAGA
361 TCCTTTGAGAG TTTTCGCCCC GAAGAACGTT TTCCAATGAT GAGCACTTTT AAAGTCTCTG
421 TATGTGGCGG GTTATTATTC CGTATTGACG CGGGCGAAGA GCAACTCGGT CGCCGATAC
481 ACTATTCCTCA GAATGACTTG GTTGAGTACT CACCACTCAC AGAAGAAGCAT CTTACGGATG
541 GCATGACAGT AAGAGAATTA TGCAGTCTG CTCTAACCAT GAGTGATTAAC ACTCGGCCCA
601 ACTTACTTCT GACAAAGTAT GAGAGACCTA CGCTTTTGTG CACTTTTGTG CACACATGCG
661 GCGATCATCT AACTCGCCTT GATCGTTGGG AACCGGAGCT GAATGAAGCG ATACCAACAG
721 ACGAGCGTGA CACCACGATG CCTGTAGCAA TTGCGCAACG CTATTAACTG
781 CGCAACTCTT TACTCTAGCT TCCCGGCAAC AATTAAATAGA CTGGATGGAG GCGGATAAAG
841 TTGCAAGACC ACTCTCGCGC TCGGCCCTTC CGGCTGGCTG GTTATTCTGT GATAAATCTG
901 GCGGCGGTGA CGGTGGGTCT CGCGGTATCA GTGCAGCACT GGGGCGCAGT GTGAAGCCCT
961 CCGGTATCGT AGTTATCTAC ACGACGGGGA GTCAAGCACT GTTATCTGCT GAGAAATAGAC
1021 AGATCGCTGA GATAGGTGCC TCACTGATTA AGCATTGATA ACTGCTCAGC CAAGTTTACT
1081 CATATATACT TATGATTGAT TTAAACATTC ATTTTAAATG TAAAGGATC TAGTGAAGA
1141 TCCTTTTGTG TAATCTCATG ACCAAATATC CTTAAGCTGA GTTTTTCGTC CACTGAGCGT
1201 CAGACCCCGT AAGAAAGATC AAAGGATCTT CTGAGATGAT GTTTTTCTGT CCGGTAATCT
1261 GCTCGCTTGA AACAAAAAAA CCACCGCTAC CAGCGGTGTT TGTGTTGCGC GATCAAGAGC
1321 TACCAACTCT TTTTCCGAAG GTAACTGGCT TCAGAGAGAG CGAGATACCA AATAATCTGC
1381 TTCTAGTGTG CCGGTAGTTA GGGCCACACT TCAAGAATCT GTTAGCAAGC CTACATATCC
1441 TCGCTCTGCT AATCCTGTGA CAGTGGGCTG CTGCGCACTG CGATAGCTGG TGCTTACCG
1501 GGTGAGACTG AAGACGATAG TTACCGGATA AGCGCGCAGC GTCGGCTGTA AGCGGGGCTT
1561 CTGCGCACCA CGCCAGCTTG GAGTCAACGA CACTGACGAT CACTGACGAT CTACGACGCT
1621 AGCATATGGA AAGGCGCAG CTTCGCGAAG GAGAAAGAGC GGACACTGAT CCGGTAAAGC
1681 CGAGGCTCGG AACAGGAGAG CGCAGAGAGG AGCTTCCAGG GGGAAACGCC TGGTATCTTT
1741 ATAGTGTCTG CGGGTTTCGC CACCTCTGAC TTGAGTGTGA TGCTCTGTGA TGCTCTGTGA
1801 GGGGCGGGAG CCTATGGAAA AACGCGCAGCA ACGCGGCTCT TTTACGGGTT CTGCGCTTTT
1861 GCTGCGCTTG TCTCACAATG TTCTTTCTGT CGTTATCCCC TGTTATCTGT GATCAACGTA
1921 TTACCGCCTT TGAGTGAGCT GATACCGCTC CGCGCAGCGG AACGACCGAG CGCAGCGAGT
1981 CAGTGAGGCA GGAAGCGGAA GAGCGCCCAA TACGCAAAAC GCCTTCTCCC GCGGCTTGCG
2041 CGATTCAATTA ATGCACTGCG CACGACAGGT TTCCGCACTG GAAAGCGGCG AGTGAGCGCA
2101 ACGCAATTA TGTGAGTTAG CTCACTCATT AGGCACCCCA GCGTTTACAC TTTATGCTTC
2161 CGGCTCGTAT GTTGTGTGGA ATTGTGAGCG GATACCAATT TCACACAGGA AACAGCTATG
2221 ACCATGATTA GCCCAAGCTA GTGACATATA ATCAATATTG GTCTATTGCG ATGACTATG
2281 TTGTATCTAT ATCAATAAT GTACATTAT ATTTGCTCAT GTCCAAATAG ACCGCAATG
2341 TGACATTGAT TATTGACTAG TTATATGAT TATGATATTA AGTCAATGAT AGTCAATGAT
2401 CCAATATGAG AGTTCGCGT TACATAACTT ACGGTAAATG CGCGGCTCG TGACCGGCA
2461 ACAGCCCGCG CCATTTGAGC TCAATAATGA CGTATGTTC CATATGTAAG CCAATAGGGA
2521 CTTTCCATAT AGCTCAATGG GTGGAGTATT TACGGTAAAC TGCCCACTG CAGTATCATC
2581 AAGTGTATCA TATGCAAGT CGCGCCCTCT ATTGACGCTA ATGACGGTAA ATGCGCCGCG
2641 TGGCATATTG CCGAGTACAT GACCTTACGG GACTTTCTTA CTTGGCAGTA GATCTACGTA
2701 TTAGTCTATG CTATTACCAT GGTGATGCGG TTTTGGCAGT ACACCAATGG GCGTGGATAG
2761 CGGTTTGCTC CACGGGGATT TCCAAGTCTC CACCCCATGG ACGTCAATG GAGTTGTTTT
2821 TTGCACCAAA ATCAACGGGA CTTTCCAAAA TGTGTAATA ACCCCGCCCC GTTGACCGAA
2881 ATGGCGCGTA GCGGTGTACG GTGGGAGGTC TATATAACGA GAGCTCGTT AGTGAACCGT
2941 CAGATCGCCT GGAGACGCCA TCCACGCTGT TTTGACCTCC ATAGAAGACA CGGGACCGGA
3001 TCAGACTCTC CGGCGCGGGA ACGGTGCATT GGAACGCGGA TTCCCGCTCG CAGCAAGTGC
3061 GTAAGTACCG CCTATAGACT CTATAGGCAC ACCCTTTTGG CTCTTATGCA TGCTATACTG
3121 TTTTGGCTTT GGGGCTTATA CAGCCCGCGT CTTATGCTA TACGCTATGG TATGCTTIAG
3181 CCTATAGGTT TGGGTTATTG ACCATTATTG ACCACTCCCC TATTGGTGAC GATATCTTTT
3241 ATTAATAATC CATAACATGG CTCTTTGCCA CAACTACTCC TATTGGTATG ATGCCAATAC
3301 TCTGCTCTTC AGAGACTGAC ACGGAGCTCT TATTTTATCA GGAATGGGTC CCAATTATTA
3361 TTTACAAATT CACATATACA ACAACGCGCT CCCCGTGGC CGAGTTTATT ATTAACACATA
3421 GCGTGGGATC TCCACGCGAA TCTCGGATGC CTATGTCGGA CATGGGCTCT TCTCGGTAG
3481 CGGCGGAGCT TCCCATCTCG AGCCCTGTGC CGATCGCTCT AGCCGCTCTT GTCGCTCTG
3541 CAGTCTCTTG CTCTCAACAG TGGAGAGATC ACTGAGATCA AGCAACGATC CAGCAACGAC
3601 CAGTGTGGCG CACAAAGCGG TGGCGGTAGG GTATGTGTCT GAAATAGAC TCGGAGATGG

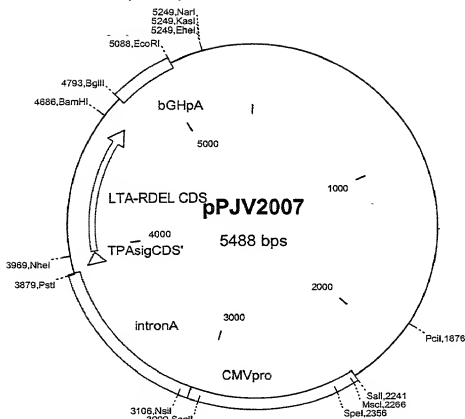
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FIGURE 5-2

3661	GGCTCGCACC	GTGACGCAGA	TGGAAGACTT	AAGGCAGCGG	CAGAAGAAGA	TGCAGGCAGC
3721	TGAGTTGTTG	TATTCTGATA	AGAGTCAGAG	GTAACTCCCG	ITGCGGTGCT	GTTAACGGTG
3781	GAGGGCAGTG	TAGTCTGAGC	AGTACTCGTT	GCTGCCGCGC	GCGCCACCAG	ACATAATAGC
3841	TGACAGACTA	ACAGACTGTT	CCTTTCCATG	GGTCTTTTCT	GCAGTCCACG	TCCAAGCTTG
3901	CAATCATGGA	TGCAATGAAG	AGAGGGCTCT	GCTGTGTGCT	GCTGCTGTGT	GGAGCAGTCT
3961	TCGTTTCGGC	TAGCGCTCCC	CAGTCTATTA	CAGAAGTATG	TTCGGAATAT	CGCAACACAC
4021	AAATATATAC	GATAAATGAC	AAGATACTAT	CATATACGGA	ATCGATGGCA	GGCAAAAGAG
4081	AAATGGTTAT	CATTACATTT	AAGAGCGGCG	CAACATTTC	GGTCGAAGTC	CCGGGCAGTC
4141	AACATATAGA	CTCCCAAAAA	AAAGCCATTG	AAAGGATGAA	GGACACATTA	AGAATCAGAT
4201	ATCTGACCGA	GACCAAAATT	GATAAATTAT	GTGTATGGAA	TAATAAAACC	CCCAATTCAA
4261	TTGCGGCAAT	CAGTATGGAA	AACTAGGGAT	CCTCGCAATC	CCTAGGAGGA	TTAGGCAGAG
4321	GCTTGAGCTC	ACGCTCTTGT	GAGGACAGGA	AATACAATCA	GGGCGATAT	ATGAATACTC
4381	CATGGAGAAA	CCCAGATCTA	CGTATGATCA	GCCTCGACTG	TGCCTTCTAG	TTGCCAGCCA
4441	TCTGTTGTTT	GGCCCTCCCC	CGTGCTTTCC	TTGACCTGCG	AAGGTGCCAC	TCCCACTGTC
4501	CTTTCCTAAT	AAAATGAGGA	AATTGCATCG	CATTGTCTGA	TAGGTGTCTA	TTCTATTCTG
4561	GGGGGTGGGG	TGGGGCAGGA	CAGCAAGGGG	GAGGATTGGG	AAGACAATAG	CAGGCATGCT
4621	GGGGATCGGG	TGGGCTCTAT	GGCTTCTGAG	GCGGAAGAAG	CCAGCTGGGG	CTCGACAGGT
4681	CGACTCTTGA	ATTCACCTGG	CGTCTGTTTA	CAACGTCGTG	ACTGGGAAAA	CCCTGGCGTT
4741	ACCCCACTTA	ATCGCCTTGC	AGCACATCCC	CCTTTGCGCA	GCTGGCGTAA	TAGCGAAGAG
4801	GGCCGCACCG	ATCGCCTTTC	CCAACAGTTG	CGCAGCCTGA	ATGGCGAATG	GCGCCTGATG
4861	CGGTATTTTC	TCCTTACGCA	TCTGTGCGGT	ATTTACACCC	GCATATGGTG	CACCTCTCAGT
4921	ACAATCTGCT	CTGATGCCGC	ATAGTTAAGC	CAGCCCCGAC	ACCCGCCAAC	ACCCGCTGAC
4981	GCGCCCTGAC	GGGCTTGTCT	GCTCCCGGCA	TCCGCTTACA	GACAAGCTGT	GACCGCTCTCC
5041	GGGAGCTGCA	TGTGTCAGAG	GTTTTCACCG	TCATCACCAG	AACGCGCGA	

FIGURE 5-3

0993307.112601



Molecule: pPJV2007, 5488 bps DNA Circular  
 File Name: pPJV2007.cm5,  
 Description: Ligation of LTA-RDEL Nhe Bam insert into 7054 Nhe Bam Vector  
 Notes:

Molecule Features:

Type	Start	End	Name	Description
REGION	2242	3060	CMVpro	
REGION	3061	3884	intronA	
GENE	3906	3969	TPAsigCDS'	
GENE	3975	4685	LTA-RDEL CDS	
REGION	4793	5089	bGHpA	

Enzymes (14 sites)

PciI	1876,	SalI	2241,	MscI	2266,	SpeI	2356
SacII	3009,	NsiI	3106,	PstI	3879,	NheI	3969
BamHI	4686,	BglII	4793,	EcoRI	5088,	EheI	5249

FIGURE 6-1



Molecule: pFJV2007, 5488 bps DNA Circular  
 Description: Ligation of LTA-RDEL Nhe Bam insert into 7054 Nhe Bam Vector  
 File Name: pFJV2007.cms,  
 Printed: 1-5488 bps (Full), format Single Strand

1 GACGAAAGGG CCTCGTGATA CGCCTATTTT TATAGGTAA TGTCAATGATA ATAATGGTTT  
 61 CTAGACGTC AATGCGCAT TTCCGGGGA AATGCGCGG AACCCCTATT TGTTATTTTT  
 121 TCTAATGCA TCTCAATATG TATCCGCTCA TGAGACAATA ACCCTGTATA ATGCTTCAAT  
 181 AATATTGAAA AAGGAAGAGT ATGAGTATTC AACATTTCCG TGTCGCCCTT ATTCCTCTTT  
 241 TTGCGGCACT TTGCCTCTCT GTTTTGTGCT ACCCAGAAAC GCTGGTGAAA GTAAAGATG  
 301 CTGAGAGATA GTTTGGGTGCA CGAGTGGGTT ACATCGAACT GGATCTCAAC AGCGGTAAAGA  
 361 TCTTTAGAG GTTTCCGCCCC GAAGAACGTT TTTCCAATGAT GAGCACTTTT AAGGTTCTGC  
 421 TATGTGGCCG GGTATTATCC CGTATTGACG CCGGCGAAGA CGCACTCGGT CGCCGCATAC  
 481 ACTATTCTCA GAATGACTTG GTTGAGTACT CACCACTCAC AGAAAGCACT TATACGGATT  
 541 CGATGACAGT AAGAGAATTA TGCACTGCTG CCATACCACT GAGTGAATAC ACTCGGGCCA  
 601 ACTTACTTCT GACAACGATC GGAGGACCGA AGGAGCTAAC CGCTTTTTTG CACAACATG  
 661 GGGATCATGT AACTCGCCTT GATCGTTGGG AACCGGAGCT GAATGAAGCC ATACCAAACG  
 721 ACGAGCGTGA CACCAACATG CCTGTAGCAA TGGCAACAC GTTGCGCAAA CTATTAACTG  
 781 CGCAACTACT TACTCTAGCT TCCCGGCAAC AATTAATAGA CTGGAGTGGG GCGGATAAAG  
 841 TTGCAGAGCC ACTTCTGCGC TCGGCGCCTC CGGCTGGCTG GTTTATTGCT GATAAATCTG  
 901 GAGCGGTGTA CGGTGGGTCT CGCGGTATCA TTGCAGCACT GGGGCGAGT GGTAAAGCCCT  
 961 CCGGTATCGT AGTTATCTAC ACGACGGGGA GTCAAGCAAC TTGAGTGAA CGAAATAGAC  
 1021 AGATCGCTGA GATAGGTGCC TCACTGATTA AGCATTGGTA ACTGTCAGAC CAAGTTTACT  
 1081 CATATATACT TTAGATTCT TTAAACCTTC ATTTTAAIT TAAAGGATC TAGGTGAAGA  
 1141 TCCCTTTTGA TAATCTCATG ACCAAATCTC CTAAACGTGA GTTTTCGTTC CACTGAGCTG  
 1201 CAGACCCCGT AGAAAAGATC AAGGATCTCT CTTGAGATCC TTTTTCCTG CCGCTATCTT  
 1261 CTGCTGTGCA AACCAAAARA CACGCGCTAC CAGCGTGTG TTTGTCGCC GATCAGAGAG  
 1321 TACCACTCTT TTTCGGAAG GTAACCTGCT TCACGAGAGC CAGACATCCA AATACTGTCC  
 1381 TTCTAGTGA GCGGTAGTTA GGCACCACTC TCAAGAATCT TGTAAGCTAC CTACATACC  
 1441 TGCTCTGTCT AATCCTGTGA CCACTGGCTG CTGCGAGTGG CGATAAGCTG TGCTCTACCG  
 1501 GGTGTGACTC AAGACATAG TTACCGGATA AGGCGCAGCG GATAGCTGTA AGCGGGGGTT  
 1561 CGTGACACCA GCCCAGCTTG GAGCGAACA CTTACACCGA ACTAGATATC TACACAGCTG  
 1621 AGCATTAGA AAGCGCCACG CTTCCGGAAG GGAGAAAGAG GGAACAGTAT CCGGTAAAGG  
 1681 CGAGGCTGCG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC TGGTATCTTT  
 1741 ATAGTCTGTG CGGGTTTCGC CACCTCTGAC TTGAGCGTGC ATTTTGTGTA TGCTCTGTCT  
 1801 GGGGGCGGAG CCTATGAAA AAACCGACGA ACGCGGCTCT TTTACGGTTT CTGGCCTTTT  
 1861 GCTGCGCTTT TGCTCATG TTCTTCTCTG CGTTATCCCC TGATTCTGTG GATAAACGTA  
 1921 TTACCGCCTT TGAAGTGAAT GATACCGCTC GCGCGAGCGG AACGACCGAG CCGAGCGAGT  
 1981 CAGTGAGCGA GGAAGCGGAA GAGCGACCAA TACGCAAAAC GCCTCTCCCC GCGGTTTGG  
 2041 CGATTCAATA ATGCACTGG CAGCAGAGCT TTCCCGACTG GAAAGCGGCA AGTGAAGCGA  
 2101 ACGCAATTA TTTGAGTAG CTCACTCAT AGGCACCGCA CGCTTTACAC TTTATGCTTC  
 2161 CGGCTGTGGA ATTGTGTGGA GTTGTGAGCG GATAACAATT TCACACAGGA AACAGCTATG  
 2221 ACCATGATTA CGCCAGCTTA GTCGACATAA ATCAATATGT GCTATTGGCC ATTGCAATG  
 2281 TGTACTCTAT ATCATATAT GTACATTTAT ATTGGCTCAT GTTCCAATATG ACCGCCATGT  
 2341 TGACATTGAT TATTGACTAG TTATTAAATG TAATCAATTA CGGGGCTCAT AGTTCAATG  
 2401 CCATATATAG AGTTCCCGGT TACATAAATT ACGGTAAATG CGCGGCTCG GACCGCCGA  
 2461 ACGAGCCCCG CCGATTGACG TCAATTAATG CGTATGTCC CATAGTAAAG CCAATAGGGA  
 2521 CTTTCCATTG ACGTCAATGG GTGGAGTATT TACGGTAAAC TGCCCACTTT GAGTACATG  
 2581 AAGTGTATCA TATGCCAAGT CCGGCGCCCT ATTGACGTCA ATGACGCTAA ATGCGCGGCC  
 2641 TGGCATATAG CCGAGTACAT GACCTTACGG GACTTTCTTA CTTGCCAGTA CATCTACGTA  
 2701 TTAGTCACTG CTATTACCAT GGTGTAGCGG TTTTGGCAGT ACACCAATGG GCGTGGATG  
 2761 CGGTTTGACT CACGGGATT TCCAAGTCTC CACCCCAATT AGCTCAATGG GAGTTTGTG  
 2821 TGGCACCAAA ATCAACGGGA CTTTCCAAAA TGTCGTAATA ACCCGCGCCC GTTGAACGAA  
 2881 ATAGGCGGTA GCGGTGTACG GTGGGAGTTC TATATAAGCA GAGCTCGTGT AGTGAACGT  
 2941 CAGATCGCCT GGAGACGCCA TCCACGCTGT TTTGACCTCC ATAGAACA CCGGACGCTG  
 3001 TCAGAGCTCC CGCGCGGGA ACGTGTGCTT GCGAGCACTG TTCCCGTGC CAGAGGTGAC  
 3061 GTAAGTACG CCGTATGACT CTATAGGAC ACCCTTTGG CTCTTATGCA TGCTATACT  
 3121 TTTTGGCTT GCGGCTATA CACCCCGCCT CCTTATGCTA TAGGTGATGG TATAGCTTGG  
 3181 CTTATAGGTG TGGGTTATTG ACCAATTATG ACCACTCCCC TATTGGTGAT GACTCATTTT  
 3241 ATTACTAATC CATACATAGG CTCTTTGCCA CAACATCTCT TATTGGCTAT ATGCCAATAC  
 3301 TCTGCTCTTC AGAGACTGAC ACGGACTCTG TATTTTACA GGATGGGCTT CCATTATTAT  
 3361 TTGTCAAAAT CATATATACA ACAACGCCGT CCCCCTGTCG CGCACTTTT ATTAAACATA  
 3421 CGTGGGATC TCCACGCGAA TCTCGGTATC GTGTTCCGGA CATGGGCTCT TTTCCGGTAG  
 3481 CGCGCGGAGT TCCACATCCG AGCCCTGGTC CCATGCTTCC AGCGGCTCAT GTGCTGCTGG  
 3541 CAGCTCCTTG CTCTTAACAG TGGAGGCCAG ACTTAGGCAC AGCAGCAACG CACCAACACG  
 3601 CAGTGTGCCG CACAAGGCCG TGGCGGTAGG GTATGTGTCT GAAATAGAC TCGAGATTG

FIGURE 6-2

3661 GGCTCGCACC ,GTGACGCAGA TGGAAGACTT AAGGCAGCGG CAGAAGAAGA TGCAGGCAGC  
 3721 TGAGTTGTTG TATTCTGATA AGAGTCAGAG GTAACTCCCG TTGCGGTGCT GTTAAACGGTG  
 3781 GAGGGCAGTG TAGTCTGAGC AGTACTCGTT GCTGCCGCGC GCGCCACCAG ACATAATAGC  
 3841 TGACAGACTA ACAGACTGTT CCTTTCATG GGTCTTTTCT GCAGTCACCG TCCAAGCTTG  
 3901 CAATCATGGA TGCAATGAAG AGAGGGCTCT GCTGTGTGCT GCTGCTGTGT GGAGCAGTCT  
 3961 TCGTTTTCGGC TAGCAATGGC GACAAATTAT ACCGTGCTGA CTCTAGACCC CCAGATGAAA  
 4021 TAAAACGTTT CGGAGGTCTT ATGCCCGAGT GGCATAATGA GTACTTCGAT AGAGGAACCTC  
 4081 AAATGAATAT TAATCTTTAT GATCACGCGA GAGGAACACA AACC3GCTTT GTCAATATG  
 4141 ATGACGGATA TGTTCCTACT TCTCTTAGTT TGAGAAAGTGC TCACCTTAGCA GGACAGTCTA  
 4201 TATTATCAGG ATATTCCACT TACTATATAT ATGTTATAGC GACACGACCA AATATGTTTA  
 4261 ATGTTAATGA TGTATTAGGC GTATACAGCC CTCACCCATA TGAACAGGAG GTTTCTGCCT  
 4321 TAGGTGGAAT ACCATATTCT CAGATATATG GATGATATCG TGTTAATTT GTGTGATTG  
 4381 ATGACAGATT ACATCGTAA CAGGAATATA GAGACCGGTA TTACAGAAAT CTGAATATAG  
 4441 CTCGCGCAGA GATTCGTTAC AGATTAGCAG GTTTCGCCACC GGATCACCAG GCTTGGAGAG  
 4501 AAGAACCCTG GATTTCATCAT GCACCAAG GTTGTGAAA TTATCAAGA ACAATTACAG  
 4561 GTGATACTTG TAATGAGGAG ACCCAAGATC TGAGCAAT ATATCTCAGG AAATATCAAT  
 4621 CAAAAGTTAA GAGCGAGATA TTTTCAGACT ATCAGTCAGA GGTTCACATA TATAACAGAA  
 4681 TTTGAGGATC CTCGCAATCC CTAGGAGGAT TAGGCAAGGG CTTGAGCTCA CGCTCTTGTG  
 4741 AGGGACAGAA ATACAATCAG GGCAGTATA TGAATACTCC ATGGAGRAAC CCAGATCTAC  
 4801 GTATGATCAG CCTCGACTGT GCCTTCTAGT TGCCAGCCAT CTGTGTGTTG CCCCTCCCCC  
 4861 GTGCTTCTCT TGACCTCGGA AGGTGCCACT CCCACTGTCC TTTCCTAATA AAATGAGGAA  
 4921 ATTGCATCGC ATTGCTGAG TAGGTGTCTAT TCTATTCTGG GGGGTGGGGT GGGGCGAGGAC  
 4981 AGCAAGGGGG AGGATTGGGA AGACAAATAGC AGGCATGCTG GGGATGCGGT GGGCTCTATG  
 5041 GCTTCTGAGG CGGAAAGAAC CAGCTGGGGC TCGACAGCTC GACTCTAGAA TTCACTGGCC  
 5101 GTCGTTTATC AACGTGTTGA CTGGGAAAAC CCTGGCGTTA CCCAATTAA TCAGCTTGCA  
 5161 GCACATCCCC CTTTCGCCAG CTGGCGTAAAT AGCGAAGAGG CCGCACCAGA TCGCCCTTCC  
 5221 CRAACAGTTG GCAGCCTGAA TGGCGAATGG CGCTGATGC GGTATTTTCT CTTACGCAT  
 5281 CTGTGCGGTA TTTCACACCG CATATGTTGC ACTCTCAGTA CAATCTGCTC TGATGCCGCA  
 5341 TAGTTAAGCC AGCCCCGACA CCGCGCAACA CCGCTGACG CGCCTGACG GCTTGTCTG  
 5401 CTCGCCGCAT CCGCTTACAG ACAAGCTGTG ACGTCTCCG GGAGCTGCAT GTGTGAGAGG  
 5461 TTTTCACCCT CATCACCGAA ACGCGCGA

FIGURE 6-3

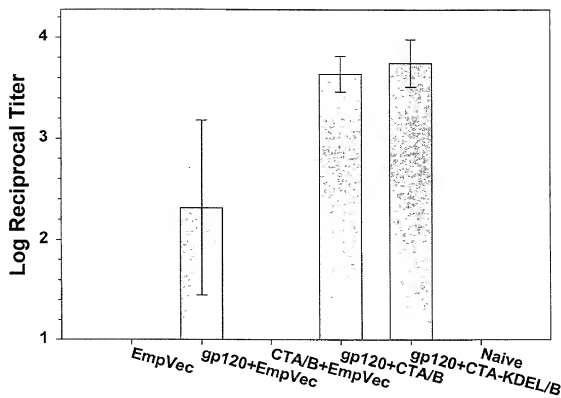


Figure 7

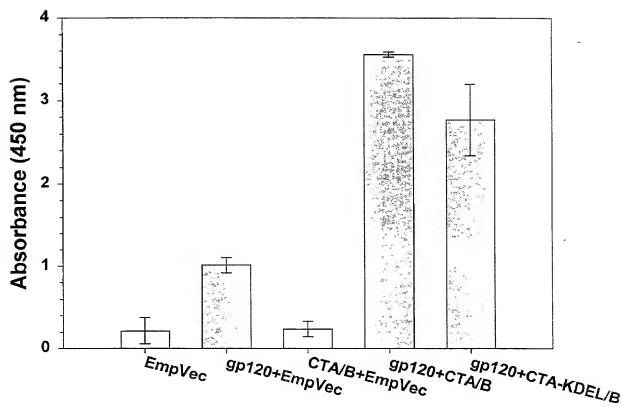
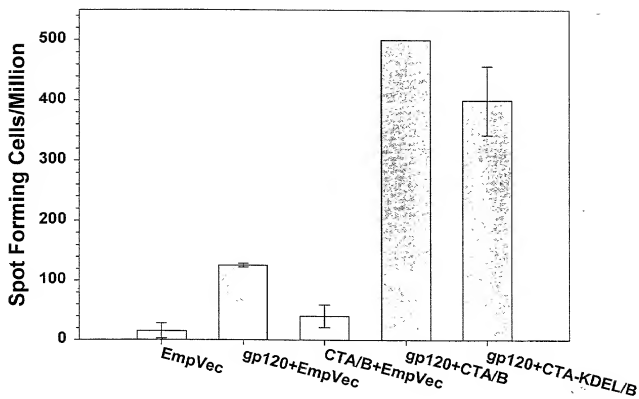
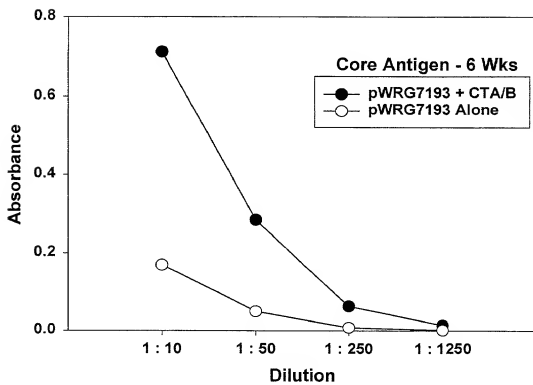


Figure 8



**Figure 9**



**Figure 10**

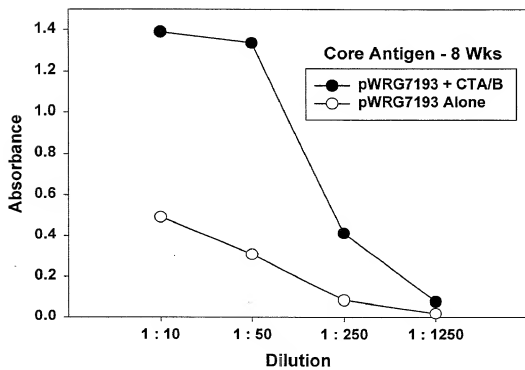


Figure 11

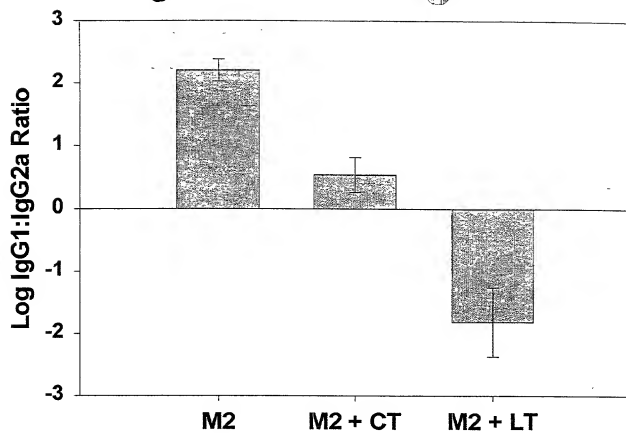
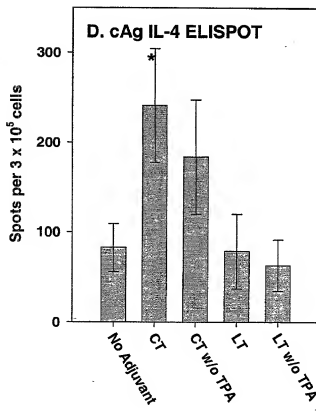
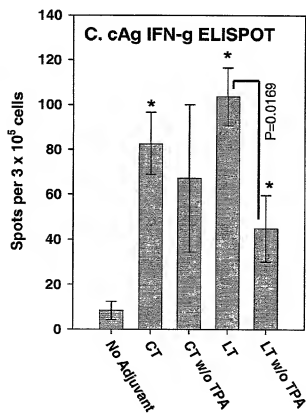
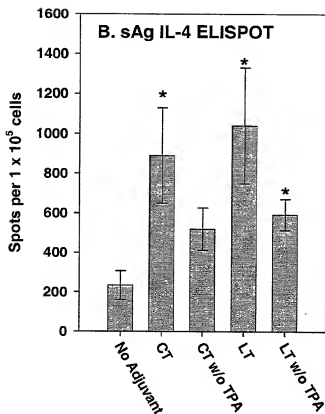
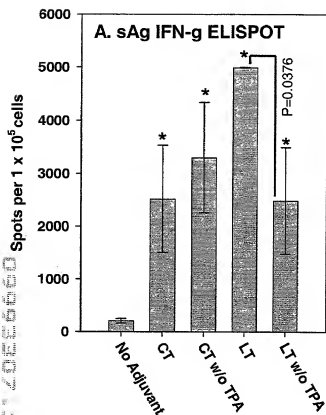


Figure 12





FIGURES 13A-13D

## Protection Against HSV-2 Challenge in Mice

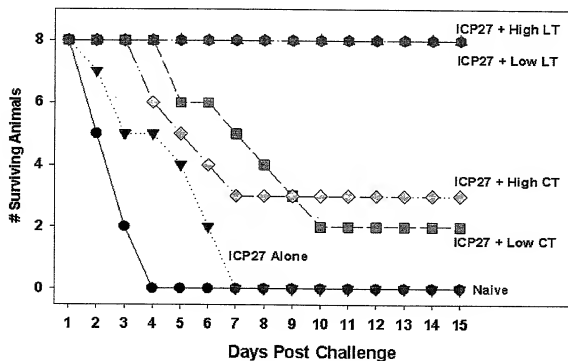


FIGURE 14